REMARKS

In view of the above amendments and following remarks, reconsideration of the rejections contained in the Office Action of May 16, 2005 is respectfully requested.

In the Office Action, the Examiner rejected claims 16, 18, 20, 22, 23, 25, 27, 29 and 38-40 as failing to comply with the enablement requirement. This rejection has been rendered moot by the above amendments by the cancellation of the objectionable material from the claims. This removal of the material resolves any issue concerning the rejection. The same is true for the indefiniteness rejection set forth in section 4 on page 3 of the Office Action.

Claims 16, 23 and 38-40 were rejected by the Examiner as being unpatentable over Laursen et al., U.S. Patent 6,555,466 (Laursen) in view of Lehman et al., U.S. Patent 6,621,264 (Lehman). Further, claims 18, 20, 25 and 27 were rejected as being unpatentable over Laursen and Lehman in further view of Hara et al., U.S. Patent 6,451,696 (Hara). Claims 18, 20, 25 and 27 were also rejected as being unpatentable over Laursen and Lehman in further view of Allen et al., U.S. Patent 6,292,708 (Allen). However, it is respectfully submitted that all of the claims now pending in the present application, as amended above, clearly distinguish over Laursen, Lehman, Hara and Allen.

Each of independent claims 16, 23, 38 and 39 have now been amended to recite "detecting a polishing end point of the first metal layer by an end point monitor." Support for this limitation can for example be found at page 15 of the specification, lines 13-21.

Further, claim 16 has been amended to recite cleaning of the substrate after the polishing of the second metal layer, drying of the substrate after the cleaning, and detecting a film thickness of the substrate after the drying by a dried condition film thickness measuring device. The dried condition film thickness measuring device is further recited as storing the film thickness of the substrate. Support for these limitations can be found at page 18, lines 14-19, page 13, lines 11-14, page 26, lines 9-16, and page 23, lines 15-25.

Claim 23 has also been amended to recite the cleaning and drying of the substrate. It further recites the detecting of the film thickness of the substrate after the drying by the dried condition film thickness measuring device. Claim 23, however, recites that the dried condition film thickness measuring device judges whether the substrate is transferred to a next process. Note for example

lines 13-23 of page 23 for support for this limitation. Note also the first complete paragraph on page 26.

Both claims 38 and 39 have been amended to recite not only the detecting of the polishing end point of the first metal layer by an end point monitor, but also detecting a film thickness of the substrate after the polishing of the second metal layer has been finished with a film thickness measuring device. The film thickness measuring device judges whether the substrate is polished again. For support, again, note page 23, lines 23-25, for example.

The patent to Laursen is directed toward improving the planarity of semiconductor wafer surfaces including detecting an end point of a first polishing step. More specifically, the invention of Laursen detects an end point of a first polishing step from any technique known in the art, including the lapse of a predetermined polishing time period. A second polishing step is carried out in a manner which reduces dishing and erosion, and repairs none-uniformities in the initial wafer surface topography after the first polishing step.

More specifically, the end point of the first polishing step can be detected by optical, motor current monitoring or temperature monitoring techniques. There does not appear to be any discussion of determining the end point of second polishing. Nor does there appear to be any discussion of even detecting the film thickness of the substrate after drying the substrate. Even further, there is no discussion of a dried condition film thickness measuring device storing a film thickness of a substrate, as in claim 16, a dried condition film thickness measuring device judging whether the substrate is transferred to a next process, as in claim 23, or a film thickness measuring device judging whether the substrate is polished again (after polishing the second metal layer) as in claims 38 and 39.

Lehman was cited for the proposition of teaching an eddy current monitor. However, it does not resolve the deficiencies of Laursen as discussed above. Noting Fig. 1 of Lehman, eddy measurement device or probe 102 is mounted within the polisher platen 110 beneath the pad 106. As such, it is clearly not suitable for detecting a film thickness of the substrate after cleaning and drying thereof. Further, neither Laursen or Lehman suggests detecting the film thickness of the substrate after the polishing of the second metal layer has been finished with the film thickness

measuring device, and then judging whether the substrate is polished again as required by the combination of steps of claims 38 and 39.

Hara was cited as teaching a particular load and pH level for the first and second polishing steps. However, Hara does not address the above-noted deficiencies of Laursen and Lehman.

Allen was cited for the proposition of teaching cleaning and drying of the substrate. However, Allen is not suggestive of detecting a film thickness of the substrate with the dried condition film thickness measuring device after cleaning and drying of the substrate.

Accordingly, it may be seen that all of the claims as now amended, including the dependent claims depending from the above-referenced four independent claims, clearly distinguish over each of Lehman, Laursen, Hara and Allen. Indication of such is respectfully requested.

In view of the above amendments and remarks, it is submitted that the present application is now in condition for allowance, and the Examiner is requested to pass the case to issue. If the Examiner should have any comments or suggestions to help speed the prosecution of this application, the Examiner is requested to contact Applicants' undersigned representative.

Respectfully submitted,

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